## IN THE CLAIMS

1. (Currently Amended) A curve generating apparatus adapted for generating, from a correspondence point identified on a curve in a first frame, a curve in a second frame, wherein the curve in the first frame relates to an extracted feature in the first frame, the apparatus comprising:

correspondence point detecting means for determining a correspondence point in the second frame corresponding to the correspondence point identified in the first frame; and

curve generating means for generating a curve in the second frame passing through the correspondence point in the second frame, wherein the curve in the second frame represents an outline of the extracted feature in the second frame,

wherein a picture image pursuit of the correspondence point identified on the curve in the first frame is used to determine the correspondence point in the second frame by determining analogousness between a first image portion including the correspondence point identified in the first frame and a second image portion including the correspondence point in the second frame by determining an absolute value sum of differences of respective pixel values within the first image portion and the second image portion, and

wherein the curve generating means is adapted so that, when the first frame is caused to be the frame at the time of start and a frame at the time of end is caused to be a third frame, it determines an interpolated curve by linear interpolation from the curve in the first frame and a curve in the third frame to deform this interpolated curve into the curve passing through the correspondence point, which is calculated by affine transformation, in the second frame,

wherein the interpolative curve is determined by linear interpolation using a path search method, and

wherein the path search method extracts a path that passes close to a portion of the curve having a higher gradient strength.


2. (Canceled).


3. (Canceled).


4. (Previously presented) The curve generating apparatus as set forth in claim 1, wherein the curve generating means generates, as the curve in the second frame, a shape along an edge of a picture image passing through the correspondence point in the second frame.

5. (Previously presented) The curve generating apparatus as set forth in claim 1, wherein the curve generating means generates, as the curve in the second frame, a contour curve of an object in a picture image.

6. (Currently Amended) A curve generating method for generating, from a correspondence point identified on a curve in a first frame, a curve in a second frame, wherein the curve in the first frame relates to an extracted feature in the first frame, the method comprising the steps of:

determining a correspondence point in the second frame corresponding to the correspondence point identified in the first frame; and

generating a curve in the second frame passing through the correspondence point in the second frame, wherein the curve in the second frame represents an outline of the extracted feature in the second frame,

wherein a picture image pursuit of the correspondence point identified on the curve in the first frame is used to determine the correspondence point in the second frame by determining analogousness between a first image portion including the correspondence point identified in the first frame and a second image portion including the correspondence point in the second frame by determining an absolute value sum of differences of respective pixel values within the first image portion and the second image portion, ~~and~~

wherein generating the curve comprises, when the first frame is assumed to be the frame at the time of start and a frame at the time of end is assumed to be a third frame, an interpolated curve is determined by linear interpolation from the curve in the first frame and a curve in the third frame to deform this interpolated curve into the curve passing through the correspondence point, which is calculated by affine transformation, in the second frame,

wherein the interpolative curve is determined by linear interpolation using a path search method, and

wherein the path search method extracts a path that passes close to a portion of the curve having a higher gradient strength.

7. (Canceled).

8. (Canceled).

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9. (Previously presented) The curve generating method as set forth in claim 6, wherein generating the curve comprises generating, as the curve in the second frame, a shape along an edge of a picture image passing through the correspondence point in the second frame.

10. (Previously presented) The curve generating method as set forth in claim 6, wherein generating the curve comprises generating, as the curve in the second frame, a contour curve of an object in a picture image.

11. (Currently Amended) A program recording medium adapted so that there is recorded program relating to curve generating processing for generating, from a correspondence point identified on a curve in a first frame, a curve in a second frame, wherein the curve in the first frame relates to an extracted feature in the first frame, the program comprising:
a correspondence point detection step of determining a correspondence point in the second frame corresponding to the correspondence point identified in the first frame; and
a curve generation step of generating a curve in the second frame passing through the correspondence point in the second frame, wherein the curve in the second frame represents an outline of the extracted feature in the second frame,
wherein a picture image pursuit of the correspondence point identified on the curve in the first frame is used to determine the correspondence point in the second frame by determining analogousness between a first image portion including the correspondence point identified in the first frame and a second image portion including the correspondence point in the second frame by determining an absolute value sum of differences of respective pixel values within the first image portion and the second image portion, and
wherein the curve generating means is adapted so that, when the first frame is caused to be the frame at the time of start and a frame at the time of end is caused to be a third frame, it determines an interpolated curve by linear interpolation from the curve in the first frame and a curve in the third frame to deform this interpolated curve into the curve passing through the correspondence point, which is calculated by affine transformation, in the second frame,
wherein the interpolative curve is determined by linear interpolation using a path search method, and
wherein the path search method extracts a path that passes close to a portion of the curve having a higher gradient strength.

12. (Previously Presented)  The curve generating apparatus as set forth in claim 1, wherein the curve generating means determines the interpolated curve by:

determining a length of a round portion of the curve in the first frame and a length of a round portion of the curve in the third frame;

determining a sampling interval along the length of the round portion of the curve in the first frame and the length of the round portion of the curve in the third frame;

executing re-sampling processing of the curve in the first fame and the curve in the third frame at the determined sampling intervals; and

preparing the curve passing through the correspondence point in the second frame based on the re-sampling processing.


13. (Previously Presented)  The curve generating method as set forth in claim 6, wherein the curve generating means determines the interpolated curve by:

determining a length of a round portion of the curve in the first frame and a length of a round portion of the curve in the third frame;

determining a sampling interval along the length of the round portion of the curve in the first frame and the length of the round portion of the curve in the third frame;

executing re-sampling processing of the curve in the first fame and the curve in the third frame at the determined sampling intervals; and

preparing the curve passing through the correspondence point in the second frame based on the re-sampling processing.


14. (Previously Presented)  The curve generating apparatus as set forth in claim 1, wherein the interpolative curve is determined by linear interpolation using a color projection axis of the curve passing through a set of correspondence points.


15. (Canceled).


16. (Canceled).


17. (Previously Presented)  The curve generating apparatus as set forth in claim 1, wherein the interpolative curve is determined by linear interpolation using a Bezier curve.

18. (Previously Presented)  The curve generating apparatus as set forth in claim 1, wherein the interpolative curve is determined by linear interpolation using a B-spline curve.